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ABSTRACT

The report discusses the status of career education programs sponsored by the Office of Education (OE) and the National Institute of Education (NIE) and points out needed improvements. The first of its four chapters briefly summarizes the concept of career education, legislation related to it, OE and NIE project objectives, funding, and the activities involved in reviewing the projects. Chapter 2 deals in depth with accomplishments of projects sponsored by OE. Discussed are: implementation at the various grade levels, use of community resources, teacher responsibeness, project impact, and the need to improve project evaluation. The status of the four national career education development projects (comprehensive school-based, experience-based, home/community-based, and rural/residential) administered by NIE is described in Chapter 3. The final chapter presents the following conclusions and recommendations: (1) project quality varied, with the most successful accomplishments occurring at the elementary level; (2) State and local educational agencies must know implementation and operation costs and expected effect on students; and (3) teacher training must be emphasized, project evaluations better planned, and adequate measures of career education impact developed. Appended is a list of officials responsible for administering the activities discussed in the report. (Author/MS)

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UNITED STATES
GENERAL ACCOUNTING OFFICE

Career Education: Status And Needed Improvements

Office of Education and
National Institute of Education
Department of Health, Education, and Welfare

The Office of Education and National Institute of Education, through career education programs, are attempting to develop and demonstrate educational experiences that students can relate to work and society as a whole.

Improvements are needed in the career education program. Before State and local educational agencies can consider career education curriculums, they must know implementation and operation costs as well as the expected effect on students.

Teacher training must be emphasized, evaluations better planned, and adequate measures of career education impact developed.

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION

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JAN. 26, 1976

UNITED STATES GENERAL ACCOUNTING OFFICE
WASHINGTON, D.C. 20548

MANPOWER AND WELFARE
DIVISION

B-164031(1)

The Honorable
The Secretary of Health,
Education, and Welfare

Dear Mr. Secretary:

This report is on career education programs sponsored by the Office of Education and the National Institute of Education.

The report discusses the status of such programs and points out needed improvements. Before State and local educational agencies can consider implementing career education curriculums, they must know the implementation and operation costs as well as the expected impact on students. Teacher training must be emphasized, evaluations better planned, and adequate measures of career education impact developed.

We discussed the contents of this report with officials of the Office of Education and the National Institute of Education and have considered their comments in preparing it.

We invite your attention to the fact that the report contains recommendations to you which are set forth on pages 26 and 27. As you know, section 236 of the Legislative Reorganization Act of 1970 requires the head of a Federal agency to submit a written statement on actions taken on our recommendations to the House and Senate Committees on Government Operations not later than 60 days after the date of the report and to the House and Senate Committees on Appropriations with the agency's first request for appropriations made more than 60 days after the date of the report.

Copies of this report are being sent to the House and Senate Committees on Appropriations and Government Operations; the appropriate legislative committees of the Congress; and the Director, Office of Management and Budget. Copies are also being sent to the Assistant Secretary for Education; the Assistant Secretary, Comptroller; the Commissioner of Education; and the Director, National Institute of Education.

Sincerely yours,

Gregory J. Ahart

Gregory J. Ahart
Director

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ABBREVIATIONS

GAO	General Accounting Office
HEW	Department of Health, Education, and Welfare
NIE	National Institute of Education
OE	Office of Education

GENERAL ACCOUNTING OFFICE
REPORT TO THE SECRETARY
OF HEALTH, EDUCATION, AND
WELFARE

CAREER EDUCATION: STATUS
AND NEEDED IMPROVEMENTS
Office of Education and
National Institute of
Education
Department of Health,
Education, and Welfare

D I G E S T

Career education activities--described as building a bridge between school and work--represent a response by the Congress and the Federal Government to a call for educational reform.

The primary objective of career education is to provide students with experiences while in school that relate to work and society as a whole. Federal participation in these activities are carried out by the Office of Education and the National Institute of Education within the Department of Health, Education, and Welfare.

Thus, an effective career education program is intended to permit every student to leave the school system with at least entry-level job skills or with the basic educational attainment to permit entry into further education programs.

However, State and local education agencies need to know the cost of implementing and continuing career education programs and curriculums as well as their impact on individuals. Projects sponsored by the Education Division have varied in their ability to demonstrate educational curriculums worthy of implementation consideration.

Teacher responsiveness to the career education concept varied among the projects GAO visited. Full cooperation by teachers will be necessary to successfully implement career education into their curriculum. This must be done before progress can be made in achieving the career education objective.

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MWD-76-81

Evaluations of Office of Education projects generally have provided inconclusive results as to the impact of career education. GAO found evaluations were hindered by the lack of adequate measures of career education impact, inadequate project planning, and difficulties with test instruments and other evaluation procedures. Certain National Institute of Education evaluations, though subject to the limitations in the art of measurement, have shown a favorable impact of career education programs.

The Secretary of Health, Education, and Welfare should direct the Education Division to:

--Analyze problems being experienced in career education implementation at the junior and senior high levels so that appropriate actions can be taken to improve the effectiveness of the career education program. (See pp. 7 to 10.)

--Emphasize the need to orient and train teachers in the implementation of career education projects.

--Increase efforts to include career education in teacher training programs at the college level.

--Increase efforts to develop appropriate measures of the impact of career education. (See pp. 14 and 18.)

--Improve evaluation of career education projects so they may be used to assess project results and to provide a basis for making project improvements and so they may be used by local education agencies in considering career education alternatives.

Improvements needed by the Office of Education include

--establishing measurable program goals and objectives for career education,

--requiring projects to establish goals and objectives (see p. 13), and

--requiring projects to plan evaluation adequately, including the collection of baseline student performance and cost data (see p. 15).

CHAPTER 1

INTPODUCTION

Career education is a concept which represents a response by the Federal Government to a call for educational reform. Career education seeks to correct primary criticisms of the American education system, such as:

1) Many persons leave the system without the basic academic skills required to adapt to today's changing society.

2) Many students fail to see meaningful relationships between what they are being asked to learn in school and what they will do when they leave the system.

3) Many persons leave the system at both the secondary and collegiate levels unequipped with the vocational skills, the self-understanding and career decision-making skills, or the work attitudes essential for making a successful transition from school to work.

The Congress, in enacting the Vocational Education Amendments of 1968 (20 U.S.C. 1241 et seq.), emphasized the need to build a bridge between school and work. Early in 1971 the then Commissioner of Education proposed career education as an approach for changing the Nation's school practices. The Congress reiterated its concern for occupational preparation programs in various sections of the Education Amendments of 1972 (20 U.S.C. 1001).

The Education Amendments of 1972 created an Education Division within the Department of Health, Education, and Welfare (HEW). It was to be headed by an Assistant Secretary for Education and composed of the existing Office of Education (OE) and a new National Institute of Education (NIE).

The Education Division established career education as one of its highest priorities. Further, the Congress, in establishing NIE, designated career education research as an area for NIE's attention. Section 406 of the Education Amendments of 1974 (20 U.S.C. 1865), signed by the President on August 21, 1974, specifically authorized OE to conduct a career education program and established within OE an Office of Career Education. The Director of this office reports to the Commissioner of Education.

The Education Amendments of 1974 define career education as an education process designed:

"(1) to increase the relationship between schools and society as a whole;

(2) to provide opportunities for counseling, guidance and career development for all children;

(3) to relate the subject matter of the curricula of schools to the needs of persons to function in society;

(4) to extend the concept of the education process beyond the school into the area of employment and the community;

(5) to foster flexibility in attitudes, skills, and knowledge in order to enable persons to cope with accelerating change and obsolescence;

(6) to make education more relevant to employment and functioning in society; and

(7) to eliminate any distinction between education for vocational purposes and general or academic education."

EDUCATION DIVISION EFFORTS IN CAREER EDUCATION

Before the enactment of the Education Amendments of 1974, the Education Division had sponsored a variety of career education efforts primarily under authority contained in (1) the Vocational Education Amendments of 1968, (2) the Cooperative Research Act, as amended (20 U.S.C. 331), and (3) the Education Amendments of 1972. Our review concentrated on career education efforts conducted under these principal authorities. In addition, the Education Division used a variety of legislative authorities to support other career education activities.

Career education projects funded and administered by OE

OE has carried out research and demonstration initiatives in career education under parts C and D of the Vocational Education Act, as amended in 1968. Part C authorizes projects for research and training, while part D authorizes model programs and projects. Over 100 research and model career education projects were established at local education agencies in the 50 States. According to OE policy papers and guidelines, each project was expected to develop and demonstrate career education programs encompassing elementary school, junior high school, and high school.

Each project serves as a demonstration site providing operational examples of career education functioning in local settings. Local school districts can observe the project operations and then consider their application. Projects may be administered by local and State education agencies and public and private agencies, insitutions, or organizations.

The elementary and secondary education program was to include structuring curriculums around the theme of career opportunities and work requirements. At the elementary level, students were to be exposed to a wide range of occupations to enhance awareness of careers. In junior high school, students were expected to explore preferred occupational clusters more intensively and develop basic job entry skills through hands-on experiences. In senior high school, students were to pursue selected occupational areas with the goal of preparing for immediate career entry upon leaving school, for postsecondary occupational education, or for college.

Throughout the program, extensive guidance and counseling activities were to be offered to help the student develop self-awareness and match interests and abilities with possible careers. An effective career education program is intended to permit every student to leave the school system with at least entry-level job skills or with the basic educational attainment to permit entry into further education programs. The ultimate goal of an effective comprehensive career education program is placing every student into a job or into further education.

For adults, career education programs were expected to increase the educational and occupational options available to all persons through a flexible educational system which would facilitate entry into the world of work or reentry into the education system.

OE established similar project characteristics for both part C and D projects on policy papers and guidelines to grantees. OE required both research and model projects to emphasize guidance and counseling and to develop and implement a comprehensive career education program or program segments. No clear distinctions appeared to exist between the part C and D projects in actual practice. Consequently, we refer to both part C and D projects as OE career education projects. We reviewed 14 of 111 OE projects.

Career education projects administered by NIE

Beginning in mid-1971 OE initiated four multiyear career education projects under authority of the Cooperative Research Act. The four projects were directed toward varied career education objectives, including development of (1) public school curriculum units, (2) a work experience program for secondary students, (3) a career counseling program for home-based adults, and (4) a career development, training, and counseling program in a residential setting for disadvantaged

rural families. In August 1972, NIE assumed responsibility for managing these projects. Consequently, while the conceptualization, planning, and initiation of these four projects were accomplished by OE, subsequent program direction was provided by NIE. Through fiscal year 1975 about $42 million had been allocated to the four projects. NIE estimates that an additional $10 to $12 million will be needed to complete the projects.

In fiscal year 1971 OE also initiated several career education projects under its educational laboratory and research and development center programs. Thirteen projects were transferred to NIE in August 1972. NIE reviewed these projects over a 9-month period and decided to terminate three, continue nine, and return one to OE because its objectives did not relate to career education. Through fiscal year 1975 NIE spent $7.6 million on these nine projects. An NIE official estimated that an additional $723,000 will be spent in fiscal year 1976 to complete the projects. Also, through fiscal year 1975, NIE had initiated 85 new career education projects on which about $7.6 million has been spent. We did not include any of the 13 transferred projects or the new projects in our review.

FUNDING

Part C of the Vocational Education Amendments of 1968 provided funds for research and development in vocational education, including career education pilot projects. In fiscal year 1972, discretionary funding available to the Commissioner of Education under section 131(a) of part C was made available to the States on a population formula basis to fund research and development projects focusing on the establishment of career education programs or segments thereof. Under this authority 56 career education research projects were established. During fiscal years 1972-75, OE and the States obligated about $36 million each for part C career education projects.

Funds for part D projects were allocated to the States by a formula specified in the law. The Commissioner was authorized to make grants to State or local education agencies from 50 percent of the funds available to each State. The State education agency could make grants from the remaining funds. The State funds were available for both vocational education and career education purposes. The Federal discretionary funds under part D were used to support at least one comprehensive 3-year career education project in each State. During fiscal years 1970-74, OE obligated about

$38.5 million of part D vocational education funds to support 55 career education model projects, and States obligated about $38.5 million to support career activities.

SCOPE OF REVIEW

We made our review at OE and NIE headquarters in Washington, D.C., and at HEW regional offices in San Francisco, Atlanta, New York, and Philadelphia.

Regarding the four NIE career education projects transferred from OE, we visited the comprehensive school-based project contractor, two of four experience-based project sites, and the home/community-based project site. Though our review included the rural/residential career education project, we did not visit the project site. We visited 14 of 111 OE-funded career education projects. These 14 projects were selected to represent several geographic areas, project sizes, and school populations.

We interviewed OE and NIE officials and reviewed policies, regulations, practices, and procedures for administering the career education program. We also interviewed contractor personnel, project officials, teachers, program participants, and local officials. Project evaluation reports were reviewed to determine their adequacy and usefulness.

CHAPTER 2

ACCOMPLISHMENTS OF CAREER EDUCATION

PROJECTS SPONSORED BY OE

OE research and model projects reviewed at the elementary school level generally had developed career education curriculums and integrated them into existing educational programs. Projects at the junior and senior high school levels, however, met with limited success. Teacher resistance to the career education concept and difficulty of curriculum revision and integration into existing programs posed problems in implementing career education curriculums at these levels.

Although community involvement was evident at all three levels, few career exploration and preparation programs had been implemented.

According to an OE-funded study, the broad goals of career education have been achieved to some extent in every State as a result of OE career education projects, and significant progress has been made in nine States.

IMPLEMENTATION OF CAREER EDUCATION AT ELEMENTARY SCHOOL LEVEL

According to OE career education guidelines, students at the elementary level were to be exposed to a wide range of occupations to enhance their awareness of careers. The OE guidelines state that in most school systems considerable curriculum revision, teacher orientation to career education concepts, increased community activities, and additional equipment and supplies would be required to accomplish this objective.

Project officials stated that success had been achieved in implementing career education at the elementary level. Generally we noted accomplishments at the elementary level at all 14 OE projects visited. For instance, at 12 projects progress had been made in incorporating the career education concept into the curriculum. At several of the projects, officials informed us that teachers participated in workshops to develop elementary curriculum materials. Specialists worked closely with the teachers in the workshops to help select and incorporate career education materials into the curriculum.

For example, one project engaged the Department of Education at a nearby college to conduct a 3-day workshop for teachers in preparing curriculum units. Two elementary career education specialists worked closely with the teachers in selecting unit topics, obtaining needed materials, and implementing curriculum units. Throughout the year teachers continued to develop or adapt curriculum units. The project also included inservice sessions during the year to assist the teachers.

Generally career education was a part of the student's day-to-day educational experiences at all 14 projects. In addition to curriculum revision, most projects included such activities as field trips, speakers from business and the community, career education games, and career role playing. Examples of activities at the elementary schools visited included the following:

--Careers were explored through visits to the community, such as attending a musical production and then interviewing persons responsible for staging the production.

--Students learned about careers through a series of 15 television programs that provided information about the range of opportunities available in several broad career areas.

--Students participated in a career exploration unit about communications. In communications class they wrote advertisements, poems, and stories. In art class they designed graphics to accompany their writing. In industrial arts class they typed, mimeographed, and assembled materials. To make posters they set type and used an electric stencil machine.

--A mobile van served as a career center for participating schools. The van was equipped with tools and machines to provide students the opportunity to use them correctly. The van contained a camera, cash registers, calculators, sewing machines, a complete hospital room, and a short order restaurant to provide basic experiences in a variety of occupational areas.

IMPLEMENTATION AT JUNIOR HIGH LEVEL

According to OE guidelines, career education objectives for the junior high level include student exploration of various occupational clusters combined with career guidance and counseling to select a cluster for indepth study at the senior high level. OE also expected projects to undertake curriculum revision to incorporate career education and provide students with hands-on experiences and field observations.

Generally the junior high programs we observed fell considerably short of the program envisioned by OE. In most projects reviewed, the program consisted of fewer curriculum revisions than noted at the elementary level along with fewer trips to locations in the community for career exploration.

Although 9 of the 14 projects had attempted curriculum revision emphasizing career implications of selected subjects, in several instances the curriculum had not been reorganized around the career education theme. For example, officials at one project site said that teachers were not required to use career education materials and there was no way of knowing how often or to what extent such materials were used.

Seven projects had instituted career exploration programs at the junior high level. At three projects the program apparently only introduced the vocational education programs available at the senior high level.

Other projects had more comprehensive career exploration activities. For example, one junior high career exploration program was designed to systematically expose students to work experience within occupational clusters by combining classroom study with community visits. One week was devoted to each occupational cluster. In the classroom, students learned about each cluster before visiting a community work site where they talked with workers about job characteristics, conditions, and the workers' feelings about the jobs.

Students were provided hands-on experience at three projects. Only one project had developed additional counseling activities to help students select career clusters for concentrated study at the senior high level.

Problems in implementing career education at the junior high level included the need to:

--Restructure the curriculum to reflect career education concepts.

--Reschedule class periods to permit meaningful exploration activities while maintaining the basic education program.

--Improve the use of community resources in providing students career exploration experiences.

--Improve teacher receptivity to the career education concept.

IMPLEMENTATION AT SENIOR HIGH LEVEL

According to OE guidelines, projects at the senior high level were expected to provide students with indepth preparation in a selected career and, upon completion, to place the student into an entry-level job or additional education. Projects were to redesign their curriculum to reflect career education concepts and emphasize guidance and counseling to help students match interests and abilities with potential careers.

None of the 14 projects visited had combined in one program the indepth career preparation, improved guidance and counseling, and revised curriculum objectives set forth by OE for the senior high level. Guidance is a general process of assisting students to better understand themselves and their surroundings and to use this understanding for career development and other purposes. Counseling, an important part of guidance, is an interpersonal relationship in which students with career problems or other concerns discuss and work toward their resolution with the assistance of others.

Improved guidance and placement was the major activity at the senior high level. Ten of the 14 projects reviewed had developed guidance and placement components. Examples at one project include:

--One high school established a centralized guidance facility to emphasize academic and career counseling. Paraprofessionals were used to lessen the administrative burden and allow counselors to have more contact with students. The project also included a needs assessment survey to ascertain student views on improvements needed in the guidance department.

--To change the role of the high school counselors, another school initiated a guidance and counseling component. Using a team approach a career counselor, assisted by several paraprofessionals, provided students with counseling in both college and career areas. The counselors also expanded their roles in job placement.

In addition, five projects had established improved placement programs within pilot high schools. For example, at one project, a placement officer met periodically with local employers to gather data on employment opportunities, screened student applicants for available jobs, and arranged interviews for qualified students. The placement officer later contacted the employer to assess the student's strengths and weaknesses from an employment potential standpoint.

Two projects established career information centers where students could independently obtain information about specific careers, including job descriptions, entry-level requirements, and pay scales.

Only 3 of the 14 projects had initiated work and occupational training components. One component was designed to provide job experience and occupational skills to dropouts, potential dropouts, and 12th graders who desired to acquire entry-level skills.

Another project sponsored an individualized program of occupational-oriented instruction, guidance, and work experience to prepare failing students and dropouts for further education or for work. Teachers designed individual learning programs for each student and consulted with parents. Counselors guided students through established career development stages, prepared them to make occupational selections, and involved them in occupational training at school or job sites.

USE OF COMMUNITY RESOURCES

A fundamental goal of career education is to more closely relate schools and the community by building into the educational system greater use of all community resources. In the context of career education, the community includes employers, both private and public; unions; and other community groups.

Various types of community participation characterized several projects visited. The business community was especially involved. Speakers were used to discuss their own careers with students in the classroom, and business firms and government activities hosted student field trips to provide students with increased insight into activities involved in certain careers. Specifically, community participation included:

--At one project, a major industrial firm was used as a liaison between schools and community businesses to arrange field trips for students. The project had also experimented with businesses as occupational learning sites, primarily for dropout-prone students.

--At another project, a major local utility loaned for over a year a key staff member to act as an industrial resource coordinator. The project also hired a job developer to work with local employers to obtain employment opportunities for the students.

--At a rural project, officials from a military base allowed some of the base's facilities to be used for career exploration activities. The base exposed students to a variety of materials and resources not available in the community, such as data processing equipment and construction machinery.

TEACHER RESPONSIVENESS TO CAREER EDUCATION

An important factor in the success of career education is the responsiveness of teachers both as individuals and as groups to the changes resulting from career education implementation. Without teacher involvement and support, career education will have difficulty in meeting its objectives. According to several local school project officials, some teachers at the junior and senior high levels were generally not receptive to the implementation of career education materials, while teachers and school administrators at the elementary levels were generally more responsive to career education activities.

For example, junior high level teachers at one project considered some of the career education curriculum materials inappropriate and the suggested activities unrealistic. Teachers at this project were not required to use the career education materials, and project officials said the materials had not been incorporated into the curriculum at the time of our visit.

Project officials at four projects said that efforts made to introduce career education materials into academic areas at the high school level presented problems. Among the problems cited were the strong orientation of high school teachers toward traditional subjects and the inherent difficulty in developing new curriculum materials relating traditional courses to career education. For example, at one project senior high career education curriculum guides covering subjects including mathematics, history, and literature had been developed. According to the project director, the guides had not been effectively implemented in the classroom and the entire high school program had been disappointing. He attributed much of the difficulty to strong teacher resistance.

Conversely, elementary teachers were generally receptive to the career education approach, according to local school project officials. These teachers revised lesson plans and provided time for such career education activities as field trips. It appeared that less extensive community involvement was required to implement career education at the elementary level than at the junior and senior high levels.

Officials at several projects visited said that securing the voluntary cooperation of teachers was a significant problem in implementing career education. OE stressed the need for projects to provide teacher training in career education. Several projects visited, however, provided only limited career education training and orientation for teachers. Apparently as a result, these projects had trouble gaining the support and involvement of teachers.

Officials in one State career education office cited a need for the Federal Government to provide for training teachers in career education implementation and to include career education in teacher training programs at the university level. Also, an OE-sponsored study to determine the impact of OE career education projects pointed out the need for programs at the college level to train teachers, school administrators, guidance counselors, and others in career education.

Before June 1975 no projects were specifically funded to develop curriculums at the college level for training teachers. At that time OE awarded four grants to demonstrate the most effective methods and techniques for training people at the college level. Until this time OE's only efforts addressing the need for training teachers in career education were contained in two projects. One of these projects produced a resource document containing goals, strategies, approaches, and other ideas for university planning in career education personnel development. The other project conducted 3 regional workshops involving over 50 institutions to stimulate career education personnel development programs.

We believe that if colleges would develop and disseminate curriculums for training teachers in career education, the implementation and viability of career education at the local school district level would be enhanced.

IMPACT OF OE CAREER EDUCATION PROJECTS

OE does not accumulate data on the impact of the OE-sponsored demonstration projects. An OE-funded study to determine the impact of projects supported by parts C and D of the Vocational Education Act concluded that they had made a significant contribution to the development and implementation of career education in every State.

Nine States--Arizona, California, Maryland, Minnesota, New Jersey, North Carolina, Ohio, Oregon, and Texas--were cited for significant progress in career education. According to the study, federally funded projects in these States as well as others have provided valuable information for the planned implementation of career education in other school districts.

NEED TO IMPROVE PROJECT EVALUATION

A major objective of the career education projects sponsored by the Education Division was to provide interested education agencies with a range of approaches, costs, and strategies to implement a career education program. Project evaluations are needed to both assess results and improve ongoing projects. In considering the establishment of similar programs, other education agencies need information concerning expected results and the potential cost of various career education approaches.

Evaluations at 9 of 14 OE projects generally attempted to measure various expected project effects, such as improved student self-awareness and awareness of employment opportunities and requirements. The evaluation results generally were inconclusive and did not show that career education improves the student's academic performance. The collection of cost data and its subsequent analysis were generally not adequate to develop costs of various project activities or to relate costs to the project's effect on students. Factors which contributed to the shortfalls in evaluation involved the absence of specific evaluation and cost analysis guidance from OE, including the lack of clear and measurable project objectives.

Shortcomings of project evaluation

The Vocational Education Act and OE project policy papers recognize project evaluation as an important aspect of OE's research and development efforts. OE guidelines indicate that research and model projects were to evaluate the project's effect on students and program components and that each project was to independently develop an evaluation strategy. Provisions for subcontracted third party project evaluations existed in the proposals of 13 of 14 OE projects we visited.

One important measure of education is its impact on students. OE stressed that projects "must be designed in such a way as to emphasize measurement of student outcomes in relation to the treatments attempted * * *." Eight of the 14 OE projects attempted to assess their effect on students. Among the major student benefits anticipated by OE were improved basic educational skills, improved personal attitudes, and increased occupational awareness.

The eight projects measured the various expected effects in a number of ways. The results were generally mixed and inconclusive. For example, at one site project personnel and evaluators from a major university developed an evaluation procedure, for which approximately $24,000 was budgeted.

Nineteen specific impact variables, including basic skills achievement, occupational awareness, and attitudes toward education, were measured. Students participating in the project and a control group of nonparticipating students were tested in relation to the 19 impact variables over 3 years. The student groups were then tested near the conclusion of the project, and the results were compared between the control and participating student groups. According to the evaluators, analysis of this data showed that while the program had probably resulted in somewhat improved student basic achievement scores, nonparticipating students had a better overall outlook toward education than participating students. No improvement in student awareness of occupations and the world of work was identified in the evaluation.

On an overall basis, the absence of evaluation procedures and data on project accomplishments precludes meaningful evaluations and comparisons of the various projects.

In several projects the impact on students was not assessed. Generally, third party evaluations for these projects consisted of a description of project operations and an assessment of project component development. For example, at one project an evaluation which cost $1,500 was conducted by a team of university educators. The team made two brief visits to the project site, interviewed project officials, reviewed project literature, and administered teacher opinion response sheets. Project officials regarded the resulting evaluation report as being of limited value to future project efforts.

Problems in evaluating career education

Educators recognize that career education's ultimate goals are long term and cannot be fully evaluated until students have completed an entire 12-year career education program and have some work experience. Other educators believe the real benefits of career education are not fully observed because of the difficulty in measuring intangibles. In addition to these fundamental difficulties, other factors contributed to evaluation problems experienced by projects.

First, OE did not provide adequate direction to projects regarding evaluation techniques. It did not issue evaluation guidelines, suggest evaluation procedures, or issue guidelines on preparing project objectives to be used in measuring project effectiveness until over 2 years after it had funded projects. According to several project officials, OE did not furnish usable evaluation techniques or procedures.

OE officials agreed that evaluation did not receive adequate attention but pointed out that OE had sponsored meetings to bring project directors together to discuss any areas of concern, including evaluation procedures. They added that when the projects were initiated, there were practically no satisfactory instruments to measure many career education results. After the completion of our field work, OE provided projects a handbook for evaluating career education programs.

Second, many project plans did not include evaluation plans. Five of the 14 projects reviewed had evaluation plans. Most of these plans simply indicated that a third party evaluation would be conducted. Officials at several projects said that no special attempts to accumulate overall evaluation data were made while the projects were ongoing. One third party evaluator stated that a lack of data hindered the overall evaluation. For another project, evaluation plans were not finalized until the project was almost completed, and project officials regarded the evaluation to be inaccurate and uninformative.

Third, several projects had trouble developing and applying meaningful and valid evaluation techniques. Some project officials regarded career awareness tests which they developed to be of poor quality and considered the resulting evaluation invalid. Officials at another project noted that personnel lacked the necessary evaluation skills and therefore found it difficult to gather the data needed.

OE recognized these problems but indicated that meaningful evaluation of OE-supported career education efforts has been inhibited by several major problems, such as

--lack of funds to support developing a set of comparable evaluation instruments,

--poor evaluation designs,

--long term nature of the goals of career education, and

--lack of OE authority to impose standard evaluation design.

An example of problems experienced in evaluating career education projects is the experience of a contractor who evaluated model local career education projects in 1974. Contractor representatives said that they encountered problems in performing the evaluation because projects lacked basic data, such as student participation, project costs, and program impact on the school system.

Need for better cost information

Cost comparisons between career education and conventional education programs are a major concern affecting any widespread attempt to adopt career education. In research project guidelines, OE required that the project design include accumulation of component cost information to judge potential duplication. OE also emphasized the need for model projects to convert developmental efforts to actual program operations.

Although OE recognized the need for proper cost data, it provided no specific guidance to local projects. Most projects budgeted costs on an object-of-expenditure basis, such as salaries, communication, supplies, and materials. One project segregated costs between elementary, junior high, and senior high levels, but no project segregated startup costs from recurring costs. In other instances, projects did not develop the cost of specific program elements, such as curriculum development, in-service training, and student field trips.

CHAPTER 3

STATUS OF CAREER EDUCATION DEVELOPMENT

PROJECTS ADMINISTERED BY NIE

OE's basic objective in initiating the four national career education development projects was to assist State and local education agencies attempting to develop career education projects. OE planned the four projects to develop materials and approaches to help provide career education to a broad spectrum of the Nation's population. The comprehensive school-based career education project was designed to help implement career education in the public schools, grades 1-12. The experience-based project was intended to develop a specialized career education program for students at the high school level. The home/community-based and rural/residential project dealt with certain career education needs of the adult population.

NIE assumed sponsorship of the four career education development projects and other career education projects from OE in August 1972. NIE changed the goals of career education research and development to (1) improving the understanding of the relationship between education and work and (2) developing various strategies for increasing the contribution education makes to individuals' abilities to choose, enter, and progress in work that is beneficial to themselves and others.

NIE significantly limited funding of the comprehensive school-based project and initiated changes where possible in the experience-based, home/community-based, and rural/residential projects to best achieve the above goals. The strategies being developed include the design, development, testing, and dissemination of

--counseling and placement programs that practitioners can use to assist youth and adults in entering and progressing in careers,

--curriculum materials to be used in schools to provide information and experiences that will facilitate better choices and entry into chosen fields,

--alternative ways of providing financial support to youth and adults for career education, and

--systemic or institutional changes to improve the delivery system.

According to NIE, the four career education development projects have provided meaningful information toward understanding the relationship between education and work. Progress has also been made in developing and testing career education strategies. In recent months several usable career education products have been disseminated to the educational community. Problems in providing marketable products have centered on demonstration of impact on program participants and competitive implementation and operation costs.

NIE believes that cost-competitive, usable career education products will soon be forthcoming as the four research and development programs are completed in fiscal year 1976. The demonstration of impact on program participants will be the focal point of future NIE career education research and development programs. A summary of costs incurred as well as additional costs anticipated to complete the four major multiyear career education projects is shown below.

	Estimated costs through FY 1975	Additional costs to complete
	(millions)	
Comprehensive school-based career education project	$ 9.5	$ -
Experience-based project	12.8	8.3
Home/community-based project	2.9	.1
Rural/residential project	18.0	2.6
Total	$43.2	$11.0

Each project is discussed below.

COMPREHENSIVE SCHOOL-BASED CAREER EDUCATION PROJECT

The comprehensive school-based project began in June 1971 when OE selected the Center for Vocational and Technical Education at Ohio State University to manage the project. In September 1971 OE selected six local education agencies to work with the Center.

This project was originally intended to assemble a meaningful career education program for kindergarten through 12th grade from curriculum units already developed by school districts and in operation. The only development activity

intended was to fill any gaps between project objectives and existing curriculum materials. Materials were to be evaluated, selected, modified, and packaged into a model program. The six participating local education agencies were to have primarily demonstration and implementation roles.

After a nationwide search for career education materials, the Center for Vocational and Technical Education determined that existing materials were inadequate for the project. As a result, the Center initiated a curriculum development program.

When NIE assumed responsibility for the project in August 1972, the research approach was changed. NIE established strict standards which required testing and revising the curriculum units before disseminating them to school districts. As a result, only 45 of 150 curriculum units were satisfactorily tested at local education agencies during the school year 1972-73. The remaining 105 units were still being field tested as of December 1975.

In addition to revising the project's curriculum development approach, NIE curtailed development of other components after extensive external reviews were conducted to determine their quality. Before this decision the contractor was developing seven components considered necessary for a comprehensive career education program. After NIE internal and NIE-sponsored external evaluations were completed, NIE discontinued most work on five (guidance, placement, support systems, evaluation, and community relations) of the seven components, leaving only the curriculum and staff development components for further development.

Among the reasons NIE officials cited for revising the project's objectives were (1) inadequate overall conceptual framework, (2) lack of progress and the poor quality of work completed before the external reviews, (3) cost of large-scale continued development in relation to benefits to be derived, (4) desire to look at other alternatives to infuse career education into the instructional program, and (5) desire to change procurement policy to allow other contractors to compete for research and development work. NIE officials said that they have funded each of the six local education agencies to develop a study showing the evolution and operation of their current career education projects. This is part of an ongoing NIE study of program implementation.

NIE has substantially curtailed the Center for Vocational and Technical Education's work on the school-based project. An open competition was held and a contractor selected to field test and revise the remaining 105 curriculum units developed by the Center.

NIE anticipates that the end products of the school-based project will be over 90 curriculum units spread over all grade levels. Thirty curriculum units (resulting from the original 45 tested and revised) have recently been published and made available to school districts. According to NIE, these units will not constitute a comprehensive curriculum package as originally intended but can be used as parts of a career education program at the local level. They can be used totally or selectively, depending upon local needs, and are intended to be illustrative of how career education can be infused into a regular school curriculum.

EXPERIENCE-BASED CAREER EDUCATION PROJECT

Development of the experience-based project began in the summer of 1971. After various feasibility studies by a number of regional education laboratories, OE decided in the spring of 1972 to begin program operations by October 1972 by funding projects at four regional educational laboratories.

The experience-based project was expected to provide high school students an alternative educational experience to the public secondary school. The experience-based approach is characterized by an individually coordinated program of student experience at employer and community sites, supplemented by learning center activities and instruction. A wide variety of employers representing a spectrum of occupations provide students with work experiences.

At the two project sites visited, volunteer students participated in the program. Students received individual counseling concerning career opportunities considering their personal preference and needs. At one project site students spent an average of 60 percent of their time at employer sites. Each student experiences about six different work situations which are usually selected by conselors after the needs and interests of the student are determined. Over 100 employers have been recruited to participate in each project. Basic learning skills were provided at a learning center at one site and at local high schools at the other site.

Students, project administrators, and employers were enthusiastic about the experience-based concept of education. Evaluations of first year performance at the two project sites visited showed student improvement in traditional academic curriculums. One evaluation noted that results were generally mixed and inconclusive with respect to other important effects on students, such as

problem-solving, planning, and decisionmaking skills. All students queried during an inhouse evaluation at one project site indicated that the experience-based career education program had influenced their career decisions. Several project officials said they believe that the experience-based concept is a viable education alternative for many students but would be inappropriate for most students as well as quite costly.

It appears possible to implement the experience-based career education concept in almost any size or type of local education agency. The primary deterrents to implementation continue to be high costs and lack of comparative data on the impact on project students.

High per pupil costs have concerned both NIE and project officials. According to statistics developed by the National Center for Education Statistics, the average nationwide cost per pupil for school year 1974-75 was estimated to be $1,255. According to NIE, in November 1974 per pupil costs were $1,300 at one project and $2,100 at the other. Per pupil costs at the two project sites that we did not visit were $2,400 and 2,800, respectively. These costs have been decreasing since the projects were instituted in September 1972 and are expected to continue to do so as the projects progress from the experimentation phase to the testing and demonstration phase.

The Educational Testing Service has been awarded a contract of about $450,000 by NIE to perform an evaluation of the experience-based project to be completed by December 31, 1975.

In July 1975, OE announced plans to issue a series of contracts and grants to implement at least 1 experience-based career education project in 42 States.

HOME/COMMUNITY-BASED CAREER EDUCATION PROJECT

The home/community-based project is designed to enhance the employability and career options of home-based adults and seeks to reach and respond to the career education needs of these adults through telephone contact with paraprofessional counselors who are familiar with existing education resources. Clients must be at least 16 years of age, not working full time or in school full time, not institutionalized, and not actively seeking full-time employment.

The only home/community-based project, in Providence, Rhode Island, began operations in October 1972. This project has four components. An outreach component is designed

to reach the home-based adults by advertising the project's free services and telephone number through radio, newspapers, television, and circulars. Paraprofessional counselors discuss the client's problem and maintain contact by telephone with the client in the career counseling component. A client is counseled to identify wants and needs and match abilities and skills with possible careers and is provided information on training institutions and subsidiary services (financial, child care, etc.) which best suit these needs.

A resource center supports both counselor and client. A unit within the center provides counselors with current information on career education programs in the immediate locale. The resource center also contains periodicals and books related to careers.

Finally, a research and evaluation component helps determine client needs, develops materials, and evaluates the project's materials and operations.

The major service element is career counseling--a telephone service designed to help home-based adults assess their own interests and experiences, explore employment possibilities, plan careers, and learn of educational and training requirements and opportunities. Although the counselors do refer clients to appropriate places for education, training, child care, financial aid, and other career-related services, this is not a "hotline" type of service. Instead, clients and counselors talk as many times as clients deem necessary, developing a sustained relationship as they cover such areas as expanding career opportunities, coping with illegal discrimination, and finding a job.

About 4,600 clients were counseled between October 1972 and January 1975. Some clients wanted to reenter the labor market, many were worried about job obsolescence, and many did not know what they wanted. According to NIE, in addition to the counseling services provided, this project has enabled NIE to learn about stages of career choice in adults and the ways in which guidance and counseling approaches based on youth are--and are not--adaptable for adults. These officials believe that project efforts have also provided useful information on the effectiveness of telephone counseling and mass media to reach certain target groups.

In April 1974 the Rhode Island Department of Education created a task force to study the need to continue this project. The study referred to the results of a special analysis done by the project of clients who were terminated from the program between March 25 and approximately May 3, 1974. The status of the 144 clients contacted follows:

--21 percent were participating or enrolled in education and training programs.

--20 percent were employed.

--21 percent planned to obtain employment or enroll in an education and training program but had not done so at the time of the analysis.

--38 percent had decided not to enroll in any education or training program or seek employment.

The task force noted that no attempt had been made to determine whether these clients were representative of the 327 clients who were terminated during the period covered by the analysis.

The third and final year of NIE sponsorship of the project ended in December 1975. In June 1975 Rhode Island made a commitment to assume sponsorship of the home/community-based project. Other States have also expressed an interest in the project.

According to NIE, two sets of material have been published by the project. The first, a set of five manuals published in July 1975, showed how to plan and operate a comprehensive career counseling service for adults. These manuals provide interested parties with discussions of principles and issues involved in establishing a home-based career education program; explanations of the methods and procedures used; samples of the materials produced; and discussions of staff, skills, and materials required.

Although the manuals are geared primarily for practitioners and policymakers, NIE officials said that the other set of materials is designed for a broader audience. They said the second set includes publications dealing with (1) the process of exploring the work world, choosing a school, overcoming obstacles to career fulfillment, and searching for a job, (2) the needs of clients considering, engaged in, or graduated from liberal arts and sciences programs, (3) postsecondary education for adults who cannot attend in a traditional manner, (4) the needs of career-concerned women, and (5) materials identified by the projects' resource component as being useful for career-concerned adults.

RURAL/RESIDENTIAL CAREER EDUCATION PROJECT

In 1968, a U.S. Air Force base at Glasgow, Montana, was officially closed, vacating a huge complex of housing and other buildings. A 1970 study concluded that the facilities

would be suited to an educational program and later led to a suggestion that the base could serve as a site for a family-type educational program. In April 1971, OE funded a demonstration program in residential family career education at the base as one of various military and civilian activities using the base facilities.

The basic premise underlying the project is that family-oriented career education in a residential setting represents an effective way to improve the employability, standard of living, community participation, and life satisfaction of the rural disadvantaged.

The project, administered by a private nonprofit corporation chartered in Montana, serves rural families of Idaho, Montana, Nebraska, North Dakota, South Dakota, and Wyoming. Families chosen to participate are moved to facilities on the base. The target population includes citizens of rural areas within the six States whose quality of life, employability, and productivity have been diminished by:

--The limited socioeconomic opportunities afforded them by the region.

--A history of social failure and low employability.

The project focuses on developing the entire family as a more productive, mutually supportive unit. Services provided include: a career development program for the head of the household and spouse, including foundation education and job training; family counseling and guidance; medical, dental, and nutritional services; homemaker training; and educational support for the children. Completion of the program is defined as achievement of the educational objectives set by the head of the household. Both completers and resignees receive placement and relocation support.

As of October 1, 1975, the project had served 1,010 families, including 170 currently on site. Of these, the head of the household for 556 families completed the program. According to NIE statistics, of those who completed the program and for whom data was available, 85 percent obtained employment. About 73 percent of those employed were in occupations for which they were trained. NIE said that the average length of stay for a family is about 8-1/2 months at an average cost of about $14,500 per family, over half of which is for family support.

NIE has awarded a contract for $670,300 to Abt Associates to evaluate this project. The final evaluation report is due in December 1976.

The rural-based project, although apparently successful in dealing with rural unemployment, does not appear to be a program that States and local education agencies would be likely to consider duplicating, primarily because of the high cost. NIE is helping the six participating States to examine possible future support of the project. Several bills have been introduced in the Congress to continue support of the project under the coordinated efforts of several Federal agencies, including NIE and the Departments of Commerce and Labor.

CHAPTER 4

CONCLUSIONS AND RECOMMENDATIONS

CONCLUSIONS

State and local education agencies will want to know the cost of implementing and continuing career education programs and curriculums as well as their impact on individuals. Projects sponsored by the Education Division have varied in their ability to demonstrate educational products and curriculums worthy of implementation consideration.

For example, accomplishments at the elementary level at OE-sponsored projects appear to best exemplify the comprehensive career education programs envisioned by OE. At the junior and senior high levels, however, considerably less success was achieved in developing comprehensive career education programs.

Teacher responsiveness to the career education concept varied. Full cooperation by teachers will be necessary to successfully implement career education materials into their curriculum. This must be done before progress in achieving the career education objective can be made.

Evaluations of OE projects have generally provided inconclusive results as to the impact of career education. Evaluation problems included the lack of adequate measures of career education impact, inadequate project planning, and difficulties with test instruments and other evaluation procedures. Certain NIE evaluations, though subject to the limitations of measurement, have shown a favorable impact of career education programs.

RECOMMENDATIONS TO THE SECRETARY OF HEALTH, EDUCATION, AND WELFARE

The Secretary should direct the Education Division to:

--Analyze problems in career education implementation at the junior and senior high levels so that appropriate actions can be taken to improve program effectiveness.

--Emphasize to projects the need to orient and train teachers in the implementation of career education.

--Increase efforts to include career education in teacher training programs at the college level.

--Increase efforts to develop appropriate measures of the impact of career education.

--Improve evaluations of career education projects so they may be used to assess project results and to provide a basis for making project improvements and so they may be used by local education agencies in considering career education alternatives. Improvements needed include (1) establishing measurable program goals and objectives for career education, (2) requiring projects to establish goals and objectives consistent with those of the overall program, and (3) requiring projects to adequately plan for evaluation, including the collection of baseline student performance and cost data.

PRINCIPAL HEW OFFICIALS

RESPONSIBLE FOR ADMINISTERING

ACTIVITIES DISCUSSED IN THIS REPORT

	Tenure of office	
	From	To
SECRETARY OF HEW:		
David Mathews	Aug. 1975	Present
Caspar W. Weinberger	Feb. 1973	Aug. 1975
Frank C. Carlucci (acting)	Jan. 1973	Feb. 1973
Elliot L. Richardson	June 1970	Jan. 1973
ASSISTANT SECRETARY FOR EDUCATION:		
Virginia Y. Trotter	June 1974	Present
Charles B. Saunders, Jr. (acting)	Nov. 1973	June 1974
Sidney P. Marland, Jr.	Nov. 1972	Nov. 1973
COMMISSIONER OF EDUCATION:		
Terrel H. Bell	June 1974	Present
John R. Ottina	Aug. 1973	June 1974
John R. Ottina (acting)	Nov. 1972	Aug. 1973
Sidney P. Marland, Jr.	Dec. 1970	Nov. 1972
DIRECTOR, NATIONAL INSTITUTE OF EDUCATION:		
Harold L. Hodgkinson	July 1975	Present
Emerson J. Elliott (acting)	Oct. 1974	July 1975
Thomas Glennan	Oct. 1972	Oct. 1974

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